

1 Cairo Governorate

Heliopolis Educational Zone
Saint Clare's College

Answer the following questions :

Question 1

A Complete the following statements :

1. Elements in group (1A) are called alkali metals as their elements react with .... forming .... solutions.
2. The highest temperature layer in the atmosphere is .... and the lowest temperature one is ....
3. From the examples of complete body fossils are .... and ....
4. By increasing the atomic number, the value of metallic property .... in the groups of the periodic table.
5. Elements of group (B) are called .... elements and they appear from period ....
6. Fluorine and chlorine exist in .... state, while iodine exists in .... state.
7. There are .... bonds between water molecules.

B Find the temperature at a point of height 2000 metres above sea level if the temperature at sea level is 23°C.

C Give reasons for :

1. The atomic size decreases in periods by increasing the atomic number.
2. Liquefied nitrogen is used in preservation of cornea of the eye.
3. Don't store tap water in empty plastic bottles of mineral water.
4. Pilots prefer to fly their planes at the lower part of stratosphere layer.

Question 2

A Write the scientific term :

1. Continuous decrease in the number of living organisms without compensation until all die out.
2. A liquid metal acts as a heat conductor in nuclear reactors for generating electricity.
3. The traces and remains of old living organisms which are preserved in the sedimentary rocks.
4. The ability of the atom in a covalent molecule to attract electrons of the chemical bond towards itself.
5. The kind of bond which binds oxygen atom with hydrogen atom in water molecule.
6. The weight of air column of an atmospheric height on a unit area.
7. A phenomenon that occurs due to the increase in the percentage of CO_2 gas and leads to an increase in the planet Earth's temperature.

B **What happens if ... ?**

1. Dissolving magnesium oxide in water (write the equation).
2. Passing chlorine gas in potassium bromide solution.
3. Drinking water polluted with mercury.

C **Locate the position of the following elements in the modern periodic table :**

1. $^{20}_{10}Ne$ 2. $^{40}_{20}Ca$ 3. $^{32}_{16}S$ 4. $^{4}_{2}He$

Question 3

A **Choose the correct answer :**

1. Meteors are formed in ....
   a. mesosphere. b. ionosphere. c. exosphere. d. stratosphere.
2. All these are greenhouse gases except ....
   a. CO_2 b. O_2 c. N_2O d. CH_4
3. From the endangered species is ....
   a. dinosaur. b. bald eagle. c. dodo bird. d. quagga.
4. All of the following metals react with water except ....
   a. K b. Cu c. Na d. Mg
5. Ozone degree is measured in a unit called ....
   a. millibar. b. nanometre. c. dobson. d. picometre.

B **Correct the underlined words :**

1. **Chlorine** element has the smallest atomic size.
2. **Chemical** pollution of water causes many diseases as typhoid and hepatitis.
3. The **thermometer** is an instrument used to measure the atmospheric pressure.
4. **Rutherford** discovered the main energy levels.
5. **Oil** is a covalent compound dissolves in water.
6. **Amphibian** fossil is a link between reptiles and birds.

C **Mention one use for each of the following elements :**

1. Altimeter. 2. Cobalt 60 3. Van-Allen belts.

Question 4

A **Put (✓) or (✗) and correct the wrong ones :**

1. Mammoth and dinosaur are old extincted animals. (   )
2. Halogens are monovalent elements. (   )
3. Solutions of metal oxides turn blue litmus papers into red. (   )
4. Mendeleev arranged the elements in an ascending order according to their atomic numbers. (   )

5. Infrared radiations have chemical effect. ( )
6. The atomic size increases in the group by increasing the atomic number. ( )
7. Tropical forest is considered as simple ecosystem. ( )

B What is meant by ... ?

1. Polar compounds. 2. Aurora phenomenon. 3. Chemical activity series.

C Mention two ways to protect living organisms from extinction.

2 Cairo Governorate

Nozha Directorate of Education
Nozha Language Schools

Answer the following questions :

Question 1

A Complete the following statements :

1. Elements that locate in the middle of the periodic table are called .... and they start to appear from the period number ....
2. Mendeleev arranged the elements ascendingly according to .... , while Moseley arranged them ascendingly according to ....
3. From the negative effects of global warming are .... and ....
4. Ozone layer is found in .... layer, while meteors are burnt in .... layer.

B Give reasons for :

1. Water and ammonia are from polar compounds.
2. Water density decreases on freezing.
3. Cobalt 60 is used in food preservation.
4. Chlorine replaces bromine in potassium bromide solution.

C If the temperature at the sea level is 26°C, find the temperature at the top of a mountain its height is 4 km.

Question 2

A Choose the correct answer :

1. The volume of oxygen evolved during electrolysis of water is .... the volume of hydrogen.
   a. equals b. half c. twice d. four times
2. Bilharzia is from the harms resulted from .... water pollution.
   a. chemical b. thermal c. biological d. radiant
3. .... fossils indicate the environment where they lived was tropical, hot and rainy.
   a. Ferns b. Nummulites c. Coral d. Dinosaurs



4. Three elements in the same period (A : non-metal , B: metal, C: metalloid), which of the following represents their correct arrangement in the period from left to right ? ....

a. | B | C | A | b. | A | B | C | c. | B | A | C | d. | C | A | B |

B Compare between :

1. Simple ecosystem and complicated ecosystem. (According to definition - example).
2. Reasons of old extinction and recent extinction (2 points for each one).
3. Halogens and alkali metals (2 points for each one).

C Mention the name representing :

1. A greenhouse gas.
2. A solid halogen.
3. A mold fossil.
4. An endangered plant.

Question 3

A Put (✓) or (✗) and correct the wrong ones :

1. "p" block elements consists of 10 groups. ( )
2. Halons are produced from supersonic planes. ( )
3. Increasing the concentration of mercury in water causes blindness. ( )
4. Some alkalis dissolve in water forming bases. ( )
5. Amber is a complete body fossil. ( )
6. Wadi El-Hetan protectorate is the first established protectorate in Egypt. ( )

B Mention one importance for :

1. Van-Allen belts.
2. Liquefied nitrogen.
3. Altimeter.
4. Fossils.

C In front of you two elements from the periodic table :

($_{12}Mg$ / $_{17}Cl$)

a. Locate them in the periodic table and mention their block.

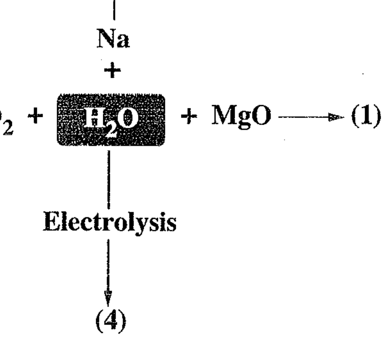
b. Which one has the smallest size ? Why ?

Question 4

A Write the scientific term :

1. Descending arrangement of metals according to their chemical activity.
2. Traces and remains of old living organisms preserved in sedimentary rocks.
3. Coloured bright curtains seen at the two poles.
4. Weight of air column of an atmospheric height on a unit area ($1m^2$).
5. A layer which plays an important role in wireless communications.

B In the opposite figure :



1. Write the products of reactions (1) , (2) , (3).
2. What is the type of solution resulted in reaction (1) ?
3. What is the effect of the product of reaction (3) on the litmus paper ? Why ?
4. In reaction (4), hydrogen gas evolves at .... , while oxygen gas evolves at ....

C Mention the name of the scientist who discovered :

1. Normal degree of ozone.
2. Protons inside nucleus.
3. Added zero group to the periodic table.
4. Main energy levels.

3 Cairo Governorate — Nasr City Educational Directorate

Answer the following questions :

Question 1



A Complete the following statements :

1. Elements of group (1A) are called ...., but elements of group (7A) are called ....
2. The hottest atmospheric layer is ...., but the coldest atmospheric layer in the atmospheric envelope is ....
3. The transition elements start to appear from the beginning of the .... period and symbolized by letter ....
4. The bond between hydrogen atom and oxygen atom in water molecule is .... bond, while bonds among water molecules are .... bonds.
5. Archaeopteryx represents a link between .... and ....
6. When the temperature of water becomes less than 4°C, its volume ...., while its density ....
7. .... are used in extinguishing fires and .... is used as coolant in cooling devices.
8. In the upper part of stratosphere, ... layer is found which absorbs .... rays emitted from the Sun.

B Mention an example for each of the following :

1. Halogen exists in a solid state.
2. The strongest metallic element.
3. Covalent compound cannot dissolve in water.
4. Trace fossil.

C **The figure shows a section of the modern periodic table :**

1. What is the atomic number of the element (Z).
2. What is the atomic number of the element (X).
3. Element ($_{11}L$) is located in period .... and group ....

X	
$_{11}L$	Z
M	
O	



A **Choose the correct answer :**

1. Eating fish, which contain high concentration of .... causes the death of brain cells.
   a. mercury b. arsenic c. lead d. iron
2. The electronic configuration of calcium ion (Ca^{++}) is similar to ....
   a. $_{18}Ar$ b. $_{7}N$ c. $_{10}Ne$ d. $_{2}He$
3. When mud fills up the shell cavities and solidify, then shell decomposes, ... is produced.
   a. a petrified wood b. a solid mold c. a cast d. no correct answer
4. The atmospheric envelope is inserted in the outer space in a region known as ....
   a. exosphere. b. ionosphere. c. stratopause. d. mesopause.
5. Ionosphere layer is surrounded by two .... belts.
   a. ionic b. electric c. heat d. magnetic

B **What happens when ... ?**

1. Storing water in plastic bottles of mineral water.
2. Meteors move at a very high velocity in mesosphere layer.
3. An atom of a nonmetallic element gains one electron or more during the chemical reaction.
4. The melting rate of polar ice increased.
5. Silica matter replaces wood material part by part of an old tree.

C **Compare between :** Basic oxides and acidic oxides.

D **Choose from column (B) what suits it in column (A) :**

(A)	(B)
1. Liquid sodium	a. is used in preservation of food.
2. Liquefied nitrogen	b. is used in manufacture of electronic devices.
3. Cobalt 60	c. is used in nuclear reactors.
4. Silicon slides	d. is used in preservation of cornea of the eye.



A **Complete the following chemical equations :**

1. $2NaBr + Cl_2 \longrightarrow$ .... + ...
2. $Mg + 2HCl \xrightarrow{dil.}$ .... + ...
3. .... + ... $\longrightarrow 2KBr$

B **Give reason for each of the following :**

1. Dodo bird was an easy target for hunters.
2. Pilots prefer to fly their planes in stratosphere.
3. Although water of oceans freezes at polar zones, the aquatic creatures are still alive.
4. Mammoth fossil is preserved as a complete body fossil.

C **Calculate the temperature at the base of a mountain, if its height is 6 km and the temperature at its top is 10°C.**

D **Choose the odd word out, then write the scientific term of others :**

1. Sodium / Silver / Potassium / Calcium.
2. N_2 / N_2O / CO_2 / CH_4
3. Panda bear / Bald eagle / Dinosaur / Barbary sheep.
4. Hofmann's voltameter / Altimeter / Barometer / Aneroid.
5. Trilobite fossil / Ammonites fossil / Nummulites fossil / Ferns fossil

Question 4



A **Correct the underlined words :**

1. Petrified wood is considered as **rocks**.
2. Each period in the periodic table starts with **inert gas**.
3. An element which is located in the 3^{rd} period and group (2A), its atomic number is **8**
4. Mixing animals and human wastes with water causes **chemical** pollution.

B **Write the scientific term :**

1. Safe places that are specified to protect the endangered species in their homeland.
2. A phenomenon that appears as brightly coloured light curtains seen at both poles of the Earth.
3. The continuous increase in the average temperature of the air near the surface of the Earth.
4. The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.
5. The solidified resinous matter, which was secreted by pine trees during old geologic ages.
6. The block that contains the series of lanthanides and actinides.

C **Mention one importance for :**

1. Altimeter.
2. Methyl bromide gas.

D **What do the following numbers indicate ... ?**

1. 300 dobson.
2. 104.5°

4 Cairo Governorate

El-Waily Educational Zone
St. Joseph Maronite Language Schools

Answer the following questions :

Question 

A Write the scientific term :

1. An atmospheric layer at which the air moves vertically.
2. The ability of the atom in the covalent molecule to attract the chemical bond electron to it.
3. A phenomenon looks like colourful light curtains seen in the two poles.
4. The traces and remains of old living organisms which are preserved in sedimentary rocks.

B Write one use for each of the following :

1. Liquefied nitrogen.
2. Sodium in liquid state.

C Locate the position of the following elements in the modern periodic table :

1. $_{19}K$
2. $_{10}Ne$

Question 

A Complete the following statements :

1. The atmospheric pressure at sea level equals .... mb.
2. The ultraviolet rays are three kinds which are .... , ... and ....
3. Sodium is kept under the surface of .... so, as not to react with ....

B Write one difference between :

1. Metals and nonmetals.
2. Mesosphere layer and thermosphere layer.
3. Coral fossils and ferns fossils.

C Write the equation of electrolysis of water.

Question 

A Give reasons for :

1. Cesium is considered from the strongest metallic element.
2. The ozone layer acts as a protective shield for living organisms.
3. Amber is considered as suitable medium to form a complete body fossil.

B What happens when ... ?

1. Putting a magnesium strip in a test tube containing oxygen.
2. Decrease in water temperature less than 4°C.

C Mention an example for :

1. Trace. 2. Cast. 3. Petrified fossil. 4. Endangered bird.

Question 4

A Put (✓) or (✗) and correct the wrong ones :

1. The troposphere is the first layer in the atmospheric envelope. ( )
2. The millibar is the unit of measuring the ozone degree. ( )
3. The decrease of plants on the Earth leads to the increase in the temperature. ( )
4. The dinosaur is the most famous extinct species recently. ( )

B Define each of the following :

1. Chemical activity series.
2. Greenhouse phenomenon.

C Find the temperature at a point of height 2000 metres above sea level, if the temperature at sea level is 23°C.

5 Cairo Governorate

Rod-El Farag Directorate
Saint Mary's School

Answer the following questions :

Question 1

A Complete the following statements :

1. .... and .... are metals which don't react with water.
2. Archaeopteryx represents the link between .... and ....
3. Mendeleev arranged the elements in an ascending order according to .... , while Moseley arranged them in an ascending order according to ....
4. Troposphere layer contains about .... of the mass of the atmospheric air and about .... of atmospheric water vapour.
5. Elements of s-block are located on the .... of the periodic table and they are arranged in .... groups.
6. The polarity of water is .... than that of ammonia as the difference in .... between elements of water is .... than that between elements of ammonia.
7. .... is used in food preservation.
8. The thickness of stratosphere is .... , while that of mesosphere is ....

B Find the location of the following elements in the periodic table :

1. $_{11}Na$ 2. $_{18}Ar$

C What happens when ... ?

1. Dissolving magnesium oxide in water then adding drops of litmus solution to it.
2. Dipping the old insects in amber.
3. Infrared radiations don't reemit back from troposphere layer.
4. There is no difference in electronegativity between hydrogen atom and oxygen atom in water molecule.

Question 2

A Write the scientific term of each of the following :

1. The strongest metal in group (1A).
2. They are symbolized by the letters s , p , d and f
3. A type of ultraviolet radiation that is absorbed completely (100 %) by the ozone layer.
4. Fossils of living organisms lived for a short time in the past in a wide geographical range then became extinct.
5. A unit that measures the degree of ozone.
6. It is a path of energy that transfers from a living organism to another.
7. The elements that occupy the middle block (d) in the periodic table.
8. The halogen that exists in a liquid state.

B Mention one example for :

1. Extinct bird in recent time.
2. Greenhouse gases.

C Mention one importance for :

1. Liquefied nitrogen.
2. Van-Allen belts.

D Calculate the height of a mountain if the temperature at the foot of the mountain is 30°C and at the top of this mountain is 10.5°C.

Question 3

A Choose the correct answer :

1. The scientist .... had discovered the main energy levels.
   a. Moseley b. Hofmann c. Bohr d. Mendeleev
2. The .... replaces the wood material, part by part of an old tree.
   a. plastic b. iron c. silica d. copper
3. .... is an example of microfossils.
   a. Mammoth b. Fern c. Foraminifera d. Coral
4. Mammoth fossil is an example of a .... fossil.
   a. cast b. mold c. complete body d. petrified
5. All of the following elements are metalloids except ....
   a. tellurium. b. silicon. c. boron. d. bromine.





6. The air in troposphere layer moves ....
   a. horizontally. b. vertically. c. inclined. d. no right answer.
7. Which of the following elements is located in the third period ? ....
   a. $_{19}K$ b. $_{6}C$ c. $_{3}Li$ d. $_{15}P$
8. Alkali metals have the following properties except they ....
   a. have low density. b. conduct electricity.
   c. don't react with water. d. conduct heat.

B **On electrolysis of acidified water by Hofmann's voltameter :**

1. What is the name of the gas that evolves at the anode ?
2. Calculate the volume of the gas formed at the cathode, if the volume of the gas that evolves at the anode is 15 cm^3.

C **What is meant by ... ?**

1. Extinction.
2. Aurora phenomenon.
3. Ozone hole.
4. Simple ecosystem.

Question 4

A **Correct the underlined words :**

1. **Nummulites** fossils are used to determine the age of the sedimentary rocks.
2. Eating food containing high percentage of lead causes **blindness**.
3. Moseley put lanthanides and actinides elements **on the left side of** the periodic table.
4. The number of electrons in positive ion is **equal to** that of its atom.
5. Storing the tap water in plastic bottles cause the increase of infection of **hepatitis**.

B **Give reasons for :**

1. Most of weather conditions take place in the troposphere layer.
2. Atomic size of sodium ($_{11}Na$) is greater than that of magnesium ($_{12}Mg$).
3. Adding drops of dilute acid to water during its electrolysis.
4. Pure water doesn't affect blue and red litmus papers.

C **Compare between :** Cast and mold.

D **Write the balanced chemical equation of the following reactions :**

1. Burning a piece of coal in air.
2. Sodium bromide with chlorine.
3. Potassium with bromine.

6 Cairo Governorate — Basateen & Dar El-Salam Educational Administration

Answer the following questions :

Question 1

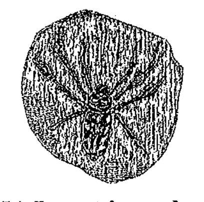
A Choose the correct answer :

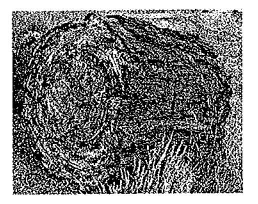
1. Bilharzia is due to the .... pollution of water.
   a. biological b. thermal c. chemical
2. The atomic radius is measured in ....
   a. nanometre. b. picometre. c. kilometre.
3. A fossil that plays an important role in petroleum exploration is ....
   a. morgan. b. nummulites. c. foraminifera.
4. The difference in electronegativity between the two elements of a polar compound is ....
   a. zero. b. relatively high. c. small.
5. Ice crystals have .... shape.
   a. tetragonal b. pentagonal c. hexagonal

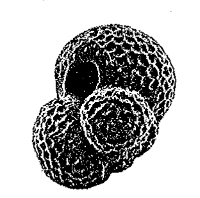
B If the temperature at the base of a mountain is 20.6°C, calculate the temperature at its top if the mountain's height is 8862 m.

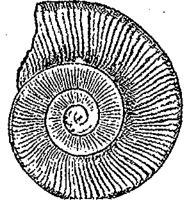
C Use the figures below to write the correct letter in the space provided :


(a) Archaeopteryx


(b) Insect in amber


(c) Petrified wood


(d) Foraminifera


(e) Ammonites

Main characteristics of fossils	Letter
1. An example of complete body preserved from decaying and form fossil.	
2. A rock mold carrying the internal details of the snail.	
3. Minerals replace the organic matter of organism, part by part, without changing its shape.	
4. Used to study life evolution as it represents the link between reptiles and birds.	
5. A good indication of the age of rocks and suitable conditions of petroleum formation.	



Question 2

A Write the scientific term of each of the following :

1. A table in which the elements are arranged according to their atomic weights.
2. An area where the atmospheric envelope is inserted in outer space.
3. Elements where their valency shell contains more than four electrons.
4. A molecule produced from the union of an oxygen atom and its molecule.
5. A safe place used to protect endangered species from extinction.
6. They indicate the age of sedimentary rocks in which they are found.

B Study the opposite figures and answer the following questions :

1. Which figure represents a positive ion ?
2. Which figure represents a neutral atom ?
3. Determine the position of the atom in the periodic table.

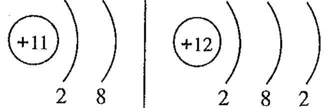


fig. (a) fig. (b)

C What is the difference between ?

1. Simple and complex ecosystems.
2. The importance of nummulites and ferns fossils.

Question 3

A Correct the underlined words :

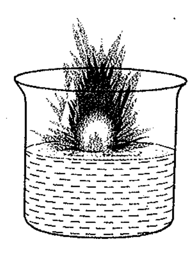
1. Dissolving basic oxides in water produces **acids**.
2. Zero group contains **active** gases.
3. The layer that represents (75%) of the atmospheric air mass is **mesosphere** .
4. Atmospheric pressure is measured by a unit called **dobson** .
5. Radio waves are reflected and transmitted by communication centres in **stratosphere** .
6. From the most important greenhouse gases is **ammonia** .

B Give reasons for :

1. Water has high boiling point.
2. Bromine cannot replace chlorine in sodium chloride.
3. Ozone layer acts as a protective shield for living organisms.
4. Global warming phenomenon has negative effects on Earth.

Question 4

A The opposite figure shows the reaction of sodium and water :



1. Write the balanced chemical equation of the reaction.
2. Name the gas produced and how you can test about it.

B Mention the importance of :

1. Liquid sodium.
2. Ras Mohamed protectorate.
3. Altimeter.
4. Coral fossils.

C Write a balanced symbolic chemical equation for the following reactions :

1. Carbon dioxide with water.
2. Potassium iodide with bromine.
3. Magnesium with dilute hydrochloric acid.

7 Giza Governorate

Boulak El-Dakrour Directorate
Dar El-Hanan Language School

Answer the following questions :

Question 1



A Complete the following statements :

1. Moseley put .... and .... series below the periodic table.
2. Each period in the modern periodic table starts with .... and ends with ....
3. The valency of alkali metal elements is ....
4. .... and .... are endangered mammals.
5. Fossils are used in .... exploration and determination the age of ....
6. Fossils always exist in the ....

B Mention the use of :

1. Liquid sodium.
2. Cobalt 60.

Question 2

A Write the scientific term :

1. A bond that exists between water molecules.
2. Indicated by the letters K, L, M, N, O.
3. A device used to measure the elevations above sea level.
4. Two magnetic belts help in scattering the harmful cosmic radiations away from the Earth.
5. Safe areas established to protect the endangered species in their homeland.

B Give reasons for :

1. Elements of the same group have the same properties.
2. Liquefied nitrogen is used in preservation of cornea of eye.
3. The lower part of stratosphere is suitable for flying planes.
4. The simple ecosystem is significantly affected by the absence of one of its species.



Question 3

A Correct the underlined words :

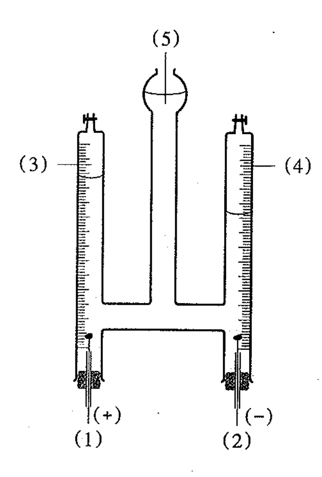
1. The elements with the same physical and chemical properties have been put in **horizontal periods**.
2. All weather phenomena like rains, wind and clouds occur in the **ionosphere**.
3. **Millibar** is the unit of measuring the ozone degree.
4. **Archaeopteryx** fossil is a kind of extinct elephants.
5. **Ammonites** fossils indicate that the environment where they lived was warm clear shallow seas.

B Calculate the height of a mountain if the temperature at its base is 30°C and at its top is (–9°C).

Question 4

A From the opposite figure :

1. What is the name of this apparatus ?
2. Label the figure.



B Locate the position of the following atoms in the periodic table :

1. $_{10}Ne$ 2. $_{20}Ca$ 3. $_{17}Cl$ 4. $_{1}H$

8 Giza Governorate

Omranya Educational Directorate
Al-Farouk Language School

Answer the following questions :

Question 1

A Write the scientific term :

1. The number of positive protons inside the nucleus.
2. The product of dissolving nonmetallic oxides in water.
3. The alkali elements.
4. A good polar solvent for most of ionic compounds and some of covalent compounds.
5. Brightly coloured light curtains at both north and south poles of the Earth.

B **Study the opposite figures, then answer :**

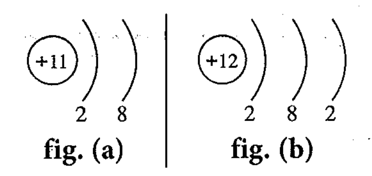


fig. (a) fig. (b)

1. Which one represents : (Positive ion – neutral atom).
2. Locate the position of the element in the periodic table (period – group).

C **1. If the temperature at the bottom of Everest mountain is 20.6°C. Find the temperature at its top if the height of the mountain is 8862 m.**

2. Mention an example for each of the following :

(1) Fossil of a complete body.

(2) Endangered plant.

(3) An extinct bird recently.

Question 2

A **Give reasons for :**

1. Elements of the same group in the modern periodic table have similar properties.
2. Potassium reacts with water instantly and faster than sodium.
3. Rising of boiling point and freezing point of water.
4. The lower part of stratosphere is suitable for flying planes.
5. Desert ecosystem is considered as a simple ecosystem.

B **1. A metallic element (X) lies in the third period and group (1A) in the modern periodic table :**

(1) Draw the electronic distribution of this element.

(2) Mention the atomic number of this element.

(3) What is the block that this element belongs to ?

(4) What is the valency of this element ?

2. Mention one importance for each of the following :

(1) Slides of silicon. (2) Van-Allen belts.

C **1. What happens when ... ?**

(1) The reaction of chlorine with the solution of potassium bromide.

(2) Dissolving magnesium oxide in water.

2. Mention one difference between :

(1) Fluorine molecule and helium molecule.

(2) The period number of an element and the group number of an element.

(3) Metals and nonmetals.



Question 3

A **Correct the underlined words :**

1. Transition elements start from the **second** period.
2. **Inert gases** have the properties of metals and nonmetals.
3. **Hydrogen** used in preserving eye cornea.
4. Fossils are often found in **igneous rocks**.
5. From ozone layer pollutants are **halons** which are used in cooling devices.

B **Write a brief description of :**

1. Global warming.
2. The relation between density of water and its temperature.

C **Choose the correct answer :**

1. The element, whose atomic number is (15) is similar in its chemical properties as the element whose atomic number is ....
   a. 5 b. 7 c. 17 d. 19
2. The measuring unit of the atomic size is ....
   a. micrometre. b. picometre. c. millimetre. d. millibar.
3. Ice crystal has .... shape.
   a. hexagonal b. octagonal c. quadrant d. pentagonal
4. Meteors are formed in ....
   a. thermosphere. b. mesosphere. c. stratosphere. d. troposphere.
5. Microfossils like ....
   a. mammoth. b. ferns. c. foraminifera. d. archaeopteryx.

Question 4

A **Complete the following statements :**

1. Sodium is kept under .... surface to prevent its reaction with ....
2. Troposphere extends above sea level to .... with thickness about ....
3. Ultraviolet radiations have .... effect, while infrared radiations have .... effect.
4. Fossils are used in searching for .... and indicate the age of .... rocks.
5. .... protectorate in USA, where .... is protected.

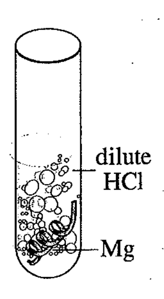
B **1. What is meant by ... ?**

(1) Metalloids. (2) Aurora phenomenon.

2. Write the electronic distribution of elements (X , Y) with atomic numbers (10, 9) respectively and then locate them in the modern periodic table.

C **1. Compare between acidic oxides and basic oxides according to :**
(product that dissolves in water - affect on litmus paper - giving example).

2. Study the opposite figure, then answer the questions :
(1) Write the balanced equation.
(2) What happens when approaching a lighted match to the opening of the tube.





9 Giza Governorate

6th October Educational Directorate
Om El-Moumeneen Language Schools

Answer the following questions :



Question 1

A **Write the scientific term :**
1. Safe areas established to protect the endangered animals.
2. The replica of the internal details of the living organism.
3. Weak electrostatic attraction that arises between the molecules of the polar compounds.
4. It is a phenomenon that appears as brightly coloured curtains seen at the two poles.
5. It is the process of replacing the wood material by silica to form petrified wood.
6. Decrease in the thickness of ozone layer.
7. The descending arrangement of elements according to their chemical activity.

B **Calculate the height of a mountain if the temperature at its base is 30°C and at its top is (–9°C).**

C **Locate the position of the following elements in the modern periodic table :**
1. $_{17}Cl$ 2. $_{10}Ne$ 3. $_{3}Li$ 4. $_{8}O$

Question 2

A **Give reasons for :**
1. Cesium is the most active metal in group (1A).
2. Sugar dissolves in water.
3. Ozone layer exists in stratosphere layer.
4. The extinction of some animals in recent ages.

B **Mention three ways to protect water from pollution.**

C **Mention the importance of :**
1. Aneroid. 2. Liquefied nitrogen. 3. Van-Allen belts.

D Give an example for :

1. Endangered plant.
2. Amphoteric oxide.
3. Liquid element from halogens.
4. Cast fossil.

Question 3

A Complete the following statements :

1. "d" block elements are called the .... elements.
2. .... and .... are from greenhouse gases.
3. There is a .... bond between hydrogen and oxygen in water molecule.
4. Cobalt 60 has the ability to kill ....
5. The existence of the coral fossils in a certain area indicate that the environment was ....
6. .... and .... are from ozone layer pollutants.
7. The strongest nonmetal lies in group ....
8. When the atomic number increases in the same period, the metallic property ....

B Compare between :

1. Simple ecosystem and complicated ecosystem.
2. Basic oxides and acidic oxides.

Question 4

A Choose the correct answer :

1. The degree of ozone under STP condition is.......... Dobson.
   a. 100 b. 200 c. 300
2. The first protectorate in Egypt is .... protectorate.
   a. Ras Mohamed b. Wadi El-Raiyan c. Panda
3. From the complete body fossils is ....
   a. mammoth. b. nummulites. c. fish.
4. The number of elements in the Earth's crust equals ....
   a. 118 b. 92 c. 120
5. The atmospheric pressure at the top of a mountain equals .... bar.
   a. 1 b. 0.05 c. 1.88
6. .... is an example of microfossils.
   a. Ferns b. Foraminifera c. Archaeopteryx

B Mention the role of the following scientists :

1. Moseley.
2. Bohr.

C Complete the equations :

1. $Cl_2 + 2KBr \longrightarrow$ .... + ...
2. $2Na + 2H_2O \longrightarrow$ .... + ...



10 Giza Governorate

Abu El-Nomrous Directorate
Future Generation Language School

Answer the following questions :

Question 1

A Choose the correct answer :

1. .... is/are used in extinguishing fires.
   a. Methyl bromide b. Halons c. Nitrogen oxides d. UV radiation
2. The second layer of atmosphere is called ....
   a. mesosphere. b. troposphere. c. stratosphere. d. thermosphere.
3. The transition elements start to appear from the beginning of the .... period.
   a. second b. third c. fourth d. fifth
4. All of the following are from endangered species except ....
   a. papyrus plant. b. bald eagle. c. quagga. d. rhinoceros.
5. p-block contains .... groups.
   a. 10 b. 2 c. 6 d. 8
6. All of the following are greenhouse gases except ....
   a. CO_2 b. O_2 c. N_2O d. CH_4
7. Group (B) contains .... elements.
   a. halogens b. nonmetals c. transition d. metalloids
8. The inert gas that has the same electronic structure as (Na^+) is ....
   a. $_{10}Ne$ b. $_{2}He$ c. $_{18}Ar$ d. $_{17}Cl$

B Give reasons for :

1. The lower part of stratosphere is suitable for flying planes.
2. It is difficult to identify semi-metals based on the electronic configuration.

C If the temperature at the sea level is 39.5°C, find the temperature at the top of a mountain of height 3650 m above the Earth's surface.

Question 2

A Put (✓) or (✗) and correct the wrong ones :

1. All periods start with a metal element. ( )
2. Hofmann's voltameter is used for water ionization. ( )
3. Mesosphere is the layer which is responsible for burning of meteors. ( )
4. Ozone layer totally absorbs all kinds of ultraviolet radiations. ( )
5. Tellurium is a metalloid. ( )
6. Complicated ecosystem contains two species. ( )
7. Petrified woods look like rocks and are considered as fossils. ( )
8. Altimeter is a kind of barometers. ( )

B What do the following numbers indicate ... ?

1. 118 2. 104.5° 3. 100°C 4. 1013.25 mb

C Compare in a table between groups (1A) and (7A).

Question 3



A Complete the following statements :

1. The safe areas established to protect endangered species are called ....
2. .... causes liver cancer.
3. $MgO + H_2O \longrightarrow$ ....
4. .... is responsible for the high boiling point of water.
5. The satellites rotate around the Earth in .... layer.
6. The scientist .... discovered the main energy levels.
7. Mammoth fossil is preserved in ....
8. Water has .... effect on litmus paper.

B What happens when ... ?

1. Storing water in plastic bottles of mineral water.
2. Increasing the numbers of cars in streets.
3. Element loses an electron.
4. Ozone layer disappeared.

C Arrange the following elements in an ascending order according to the metallic property and give a reason :

Sodium ($_{11}Na$) – Magnesium ($_{12}Mg$) – Potassium ($_{19}K$) – Cesium ($_{55}Cs$)

Question 4



A Write the scientific term :

1. The measuring unit of the atomic size of an element.
2. The region between troposphere and stratosphere.
3. The number of protons inside the nucleus of the atom of an element.
4. The halogen which exists in a solid state.
5. Remains of old living organisms that are preserved in sedimentary rocks.
6. The permanent change of water by adding any substance.
7. The descending arrangement of elements according to their chemical activity.
8. They are safe areas established to protect endangered species in their homeland.



B Locate the position of the following elements in the periodic table (show their configuration) :

1. Calcium ($_{20}$Ca).
2. Silicon ($_{14}$Si).

C What is meant by ... ?

1. Ozone layer.
2. Electronegativity.

11 Alexandria Governorate — Middle Educational Zone New S.L.S. "Girls"

Answer the following questions :

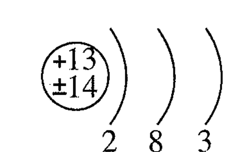


Question 1

A Write the scientific term of each of the following :

1. The scientist who discovered that the atom contains positive protons in the nucleus.
2. Elements which have properties of metals and nonmetals.
3. Adding any substance to the water which changes its properties, affects the health and life of living organisms.
4. The weight of air column on a unit area ($1m^2$).
5. Two magnetic belts surrounding ionosphere and play an important role in scattering harmful charged cosmic radiations.
6. The continuous increase in the average temperature of the Earth's near surface air due to the greenhouse effect.
7. Traces and remains of old living organisms that are preserved in sedimentary rocks.
8. The continuous decrease without compensation in the number of a certain species until all the members of species die out.
9. The apparatus which is used for water electrolysis.
10. A mammal between horse and zebra that extinct recently due to overhunting.
11. The ability of the atom to attract the electrons of the covalent bond towards itself.

B Look at the opposite figure, then find the location of this element in the modern periodic table. Mention the block of this element.





Question 2

A Give reasons for :

1. Atomic size decreases in the period from left to right.
2. Reaction of potassium with water is stronger than that of sodium with water.
3. Pilots prefer to fly their planes in stratosphere layer.
4. Silicon slides are used in making electronics as computers.

B Choose from column (B) what suits it in column (A) :

(A)	(B)
1. $2Na + 2H_2O \longrightarrow$	a. unit of measuring the thickness of ozone layer.
2. $Br_2 + 2KI \longrightarrow$	b. is from endangered species.
3. Coral fossils	c. $2NaOH + H_2$
4. Dobson	d. extinct because it has small wings so, it was easy to get hunted.
5. Dodo bird	e. $2KBr + I_2$
6. Papyrus plant	f. showed that the environment where they lived was clear, warm and shallow seas.

C Correct the underlined words in each of the following statements :

1. Pure water has **acidic** effect on litmus paper.
2. Ultraviolet radiation has **thermal** effect on the Earth.
3. Increasing the concentration of mercury in water causes **liver cancer**.
4. **Snow** is a solidified resinous matter secreted by pine trees.

Question 3

A Find the temperature at a point of height 10 km above sea level, if the temperature at sea level is 24°C.

B Complete each of the following statements :

1. .... is from the examples of polar compounds because the difference in electronegativity between its elements is relatively ....
2. .... classified the elements in his table according to their properties and atomic mass.
3. .... is a type of barometers used to determine the possible day weather.
4. .... is from the factors that cause extinction of species.
5. Microfossils (foraminifera and radiolaria) help in .... exploration.
6. $Mg + 2HCl \xrightarrow{dil.}$ .... + ...
7. .... and .... are from greenhouse gases.
8. .... fossils indicate the age of sedimentary rocks.

Question 4

A Choose the correct answer :

1. .... protectorate is a natural protectorate in USA where grey bear is protected.
   a. Ras Mohamed   b. Wadi El-Raiyan   c. Bluestone   d. Panda
2. Ozone layer prevents (100 %) of .... ultraviolet rays from passing to the Earth.
   a. near   b. medium   c. far   d. (a) and (b) together

3. The modern periodic table contains .... elements.

a. 26 b. 92 c. 100 d. 118

4. Which of the following is an acidic oxide ? ....

a. CO_2 b. MgO c. Na_2O d. FeO

5. Which of the following is a radioactive element which is used in food preservation ? ....

a. Liquid sodium. b. Liquefied nitrogen.

c. Cobalt 60. d. Water.

6. Which of the following is correct about alkali metals ? They ....

a. have high density. b. are monovalent.

c. are bad conductors of electricity. d. form negative ions.

7. Water has high boiling point due to the presence of .... bonds between its molecules.

a. hydrogen b. ionic c. covalent d. metallic

8. .... added group zero in his table for noble gases.

a. Mendeleev b. Moseley c. Rutherford d. Einstein

9. Which of the following is the halogen that exists in a solid state ? ....

a. Fluorine. b. Chlorine. c. Bromine. d. Iodine.

10. When putting a glass bottle completely filled with water in the freezer, it breaks because when water freezes its .... increases.

a. temperature b. density c. volume d. acidity

11. Which of the following elements don't react with water ? ....

a. K and Na b. Ca and Mg c. Zn and Fe d. Cu and Ag

12. What is the volume of hydrogen gas evolved from electrolysis of acidified water if you know that the volume of oxygen gas evolved is 2 cm^3 ? ....

a. 1 cm^3 b. 2 cm^3 c. 4 cm^3 d. 6 cm^3

B Mention the type of the fossils shown in the following figures :

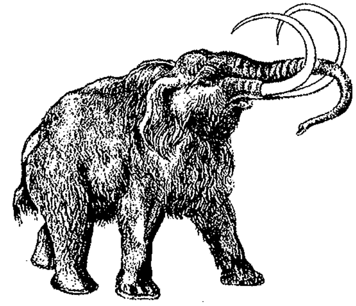


fig. (1)



fig. (2)



12 Alexandria Governorate — El-Agamy Educational Zone

Answer the following questions :

Question 1

A Complete the following statements :

1. From types of fossils are .... and ....
2. The new number for group (6A) is ....
3. $Mg + 2HCl \xrightarrow{dil.}$ .... + ...
4. The coldest layer in atmosphere is called .... , while the hottest layer is called ....
5. $2NaBr + Cl_2 \longrightarrow$ .... + ...
6. The nuclear reactors cause .... pollution for water.

B Look at the opposite figure, then calculate :

1. The atomic number of the element follows it in the same period.
2. The atomic number of the element follows it in the same group.

Question 2

A Choose the correct answer :

1. Fossils are often formed in .... rocks.
   a. metamorphic b. sedimentary c. igneous
2. From the extinct species is ....
   a. dodo bird. b. lion. c. panda.
3. .... form positively charged ions when they enter in a chemical reaction
   a. Inert gases b. Halogens c. Alkali metals
4. The unit of measuring the degree of ozone is ....
   a. km. b. litre. c. dobson.
5. From the endangered species is ....
   a. bald eagle. b. passenger pigeon. c. tasmanian cat.
6. The device that is used for determining the elevation from sea level is ....
   a. aneroid. b. altimeter. c. thermometer.
7. Decreasing CO_2 gas percentage is caused by ....
   a. cutting trees. b. cultivating trees. c. burning fossils fuel.
8. All of the following elements are from semi-metals except ....
   a. silicon. b. boron. c. bromine.
9. The atmospheric pressure on the top of a mountain is .... the atmospheric pressure at the sea level.
   a. more than b. less than c. equal to

B Calculate the temperature at the top of a mountain if you know that the temperature at its foot is 26°C and its height is 4 km.

Question 3

A Write the scientific term :

1. The continuous decrease in the number of a certain species of living organisms without compensation until the last member of the species dies out.
2. Shells in the atom structure indicated by the letters K, L, M, N, O
3. Appearance of bright coloured light curtains at the two poles.
4. The weight of air column of an atmospheric height on a unit area.
5. A charged layer which reflects radio waves.
6. The continuous increase in the average temperature of the Earth.

B Locate the following element in their position in the modern periodic table :

1. $_{20}Ca$ 2. $_{17}Cl$ 3. $_{3}Li$ 4. $_{7}N$

Question 4

A Give reasons for the following :

1. Water molecule is a polar compound.
2. The lower part of stratosphere is suitable for flying planes.
3. Tropical forest is a complicated ecosystem.

B Correct the underlined words :

1. **Sodium** is used in making electronic slides.
2. Cobalt 60 is used in preservation of **cornea of eye**.
3. When water freezes, its **density** increases.
4. The ozone hole appears above the **middle east**.

13 Alexandria Governorate — Al-Gomrok Educational Zone

Answer the following questions :

Question 1

A Choose the correct answer :

1. The temperature at the top of mesosphere layer reaches ....
   a. – 60°C b. – 90°C c. 0°C d. 120°C
2. The strongest metal locates in group ....
   a. 2A b. 1A c. 7A d. zero





3. .... is an example of extinct species.
   a. Panda bear b. Bald eagle c. Quagga d. Papyrus plant
4. If the atomic number of an element is 15, so the electronic configuration of its ion is ....
   a. (2,8,8). b. (2,8). c. (5,8,5). d. (2,5,8).
5. The gas produced from the reaction between sodium bicarbonate and vinegar is ....
   a. CH_2 b. N_2O c. H_2 d. CO_2

B What happens in the following cases ... ?

1. Decrease in water temperature less than 4°C.
2. Storing tap water in plastic bottles of mineral water.

C Locate the position of these elements in the modern periodic table :

1. $_{2}He$ 2. $_{19}K$ 3. $_{7}N$

Question 2

A Write the scientific term :

1. The continuous decrease in the number of species without compensation until all die out.
2. The hottest layer in the atmosphere.
3. The elements which have the properties of both metals and nonmetals.
4. They are safe areas established to protect the endangered species in their homeland.
5. The radioactive element that is used in food preservation.

B Compare between :

Mendeleev's periodic table and modern periodic table.

C Mention one use or importance for the following :

1. Hofmann's voltameter. 2. Liquefied nitrogen. 3. Van-Allen belts.

Question 3

A Complete the following statements :

1. The fossils are found in .... rocks.
2. Increasing the concentration of .... in water causes the death of brain cells.
3. $Br_2 + 2KI \longrightarrow$ .... + ...
4. The snow crystal has .... shape.

B If a mountain, its height is 6000 m and the temperature at its base is 30°C. Calculate the temperature at its top.



C Mention one example for :

1. An element doesn't react with water.
2. A type of microfossils which is considered a guide for existence of petroleum.
3. An endangered bird.

Question  4

A Correct the underlined words :

1. **Methyl bromide** used in extinguishing fires.
2. The unit of measuring the degree of ozone layer is **bar**.
3. Ca and **Na** react slowly with water.
4. **Lithium** is the strongest metallic element in group (1A).
5. $\mathbf{O_2}$ is from greenhouse gases.

B Give reasons for the following :

1. Freon gas has bad effects on the environment.
2. By increasing the atomic number among groups, the atomic size increases.
3. Amber is considered a suitable medium for formation of complete body fossils.

C Write the balanced chemical equations representing each of the following :

1. Magnesium with hydrochloric acid.
2. Reaction of sodium with water.

14 El-Qalyoubia Governorate — Banha Educational Zone

Answer the following questions :

Question  1

A Choose the correct answer :

1. All of the following elements are from semi-metals except ....

   a. tellurium. b. silicon. c. boron. d. bromine.

2. The strongest metal locates in group ....

   a. 2A b. 1A c. 1B d. 7A

3. Ozone layer doesn't allow the passage of .... ultraviolet rays.

   a. near b. medium
   c. far d. all the previous answers

4. There are .... bonds between water molecules.

   a. hydrogen b. covalent
   c. ionic d. all the previous answers

5. Fossils are found in .... rocks.
   a. igneous   b. sedimentary
   c. metamorphic   d. all the previous answers
6. All of the following are endangered species except ....
   a. panda bear.   b. bald eagle.   c. quagga.   d. rhinoceros.

B Give reasons for :

1. Elements of the same group have similar properties.
2. The use of radioactive cobalt 60 in food preservation.
3. The infrared radiation cannot penetrate the Earth's atmosphere.
4. Establishing a gene bank for the endangered species.

C Find the temperature at the top of a mountain, its height is 3 km, if the temperature at the sea level is 15°C. Is snow formed or not and why ?

Question 2

A Write the scientific term :

1. The continuous increase in the average temperature of the Earth's near-surface air.
2. Fossils used in determination of the age of rocks.
3. A charged layer which reflects radio waves.
4. The arrangement of metals in a descending order according to their chemical activity.
5. The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.
6. It is the path of energy that transmits from a living organism to another in the ecosystem.

B How can you differentiate chemically between each of the following ?

1. Copper and zinc (by adding HCl). Write the balanced chemical equation.
2. Magnesium oxide and sulphur oxide.

C Locate the position of the following elements in the modern periodic table :

1. $_{20}Ca$ 2. $_{10}Ne$ 3. $_{17}Cl$ 4. $_{8}O$

Question 3

A Put (✓) or (✗) and correct the wrong ones :

1. Water and ammonia are non-polar compounds. ( )
2. Liquefied sodium is used in preservation of cornea of the eye. ( )
3. The atomic size decreases in periods as the atomic number increases. ( )
4. Lacking of plants on the Earth leads to the increase in the temperature. ( )
5. Quagga is an extinct animal in the recent times. ( )

B Mention one importance or use for :

1. Altimeter.
2. Foraminifera microfossil.
3. Silicon.
4. Mesosphere.

C Complete the following equations :

1. $CO_2 + H_2O \longrightarrow$ ....
2. $Br_2 + 2KI \longrightarrow$ .... + ...
3. $2Na +$ .... $\longrightarrow 2NaOH +$ .... $\uparrow$
4. $2H_2O \xrightarrow{\text{electrolysis}}$ .... $\uparrow$ + ... $\uparrow$

Question 4

A Correct the underlined words :

1. Elements in group (1A) are known as **halogens**.
2. **Mammoth** is one of the examples of petrified fossils.
3. Ozone degree is measured in **picometre** unit.
4. Each period ends with **a nonmetal**.

B What happens when ... ?

1. Putting lithium in kerosene.
2. Drinking water polluted with mercury.
3. Increasing the use of CFC_s on Earth.
4. Mixing of animal and human wastes in water.

C Compare between (related to definition and examples) :

1. Simple ecosystem and complicated ecosystem.
2. Cast and mold.

15 El-Sharkia Governorate — West Zagazig Admin.

Answer the following questions :

Question 1

A Choose the correct answer :

1. Elements of the modern periodic table are classified into .... block(s).
   a. one b. two c. three d. four
2. .... is an atom of a non-metallic element which gains an electron or more during the chemical reaction.
   a. Positive ion b. Negative ion
   c. Excited atom d. No correct answer

3. All of the following are greenhouse gases except ....

a. O_2 b. CO_2 c. N_2O d. CH_4

4. The ozone degree is measured by a unit called ....

a. km. b. mm^2. c. dobson. d. millibar.

B Give reasons for :

1. Sodium is kept under the surface of kerosene.
2. Ionosphere layer is important for radio stations.

C What is meant by ... ?

1. Water pollution.
2. Global warming phenomenon.

Question 2

A Put (✓) or (✗) and correct the wrong ones :

1. Ferns fossils indicate that the environment where they lived was a sea floor. ( )
2. The boiling point of liquefied nitrogen is (– 196°C). ( )
3. Stratopause is the region between stratosphere and troposphere. ( )
4. Tropical forest is an example of complicated ecosystem. ( )

B What is the importance of ... ? (give only one use)

1. Cobalt 60
2. Fossils.

C Locate the position of the following elements in the modern periodic table :

1. $_{10}Ne$
2. $_{19}K$

Question 3

A Complete the following sentences :

1. Mendeleev arranged the elements ascendingly according to ...., while Moseley arranged them ascendingly according to ....
2. Archaeopteryx is the link between .... and ....
3. The highest temperature layer in the atmosphere is .... and the least temperature one is ....
4. Group (1A) is called .... , but group (7A) is called ....

B Give one example for :

1. An extinct bird.
2. A polar compound.
3. Severe climatic changes.
4. An endangered plant.

C What happens when ... ?

The absence of one type of species from the simple ecosystem.

Question 4

A Write the scientific term :

1. The solidified resinous matter which was secreted by pine trees during old geologic ages.
2. The bond between water molecules.
3. A gas which is important for building ozone gas.
4. A phenomenon that appears as brightly coloured light curtains seen at the both poles of the Earth.

B Compare between :

1. Trace and remains.
2. Troposphere and stratosphere.

C Write the chemical equation which represents the following reactions :

1. Magnesium with dilute hydrochloric acid.
2. Carbon dioxide with water.

16 El-Menofia Governorate — Shebin El-Kom Directorate

Answer the following questions :

Question 1

A Complete the following sentences :

1. In the periodic table, the elements which are identical in properties lie in the same ....
2. Mendeleev had to deal with the .... of one element as different elements, because they are different in their ....
3. d-block contains .... elements.
4. $2Na + 2H_2O \longrightarrow$ .... + ...
5. Among the most famous types of barometers are .... and ....
6. Types of fossils differ according to their way of ....
7. The snow crystal's shape is .... and its density is .... than water density.

B Locate the position of the following elements in the modern periodic table :

1. ${}_{1}H$
2. ${}_{10}Ne$
3. ${}_{20}Ca$

Question 2

A Write the scientific term :

1. They are the elements which have the properties of both metals and nonmetals.
2. A table in which the elements are arranged according to their atomic numbers.
3. It is the curved lines that join the points of equal pressure in atmospheric pressure maps.
4. Safe places are specialized for protecting endangered species in their homeland.





B **Give reasons for :**

1. Cesium (Cs) is considered one of the strongest metallic elements.
2. Mesosphere layer is highly rarefied (vacuumed).
3. Petrified woods are considered from fossils although they look like rocks.

C **Complete the following equation :**

$Br_2 + 2KI \longrightarrow$ .... + ...

Question 3

A **Put (✓) or (✗) and correct the wrong ones :**

1. The solutions produced from dissolving the nonmetal oxides in water, turn the violet litmus solution into red. ( )
2. Copper (Cu) and silver (Ag) react very slowly with cold water. ( )
3. Bohr had discovered the main energy levels. ( )
4. Ferns fossils indicate that the environment where they lived was a sea floor. ( )

B **Compare between the following :**

1. Chlorine and bromine. (according to : the physical state and chemical activity)
2. Simple ecosystem and complicated ecosystem. (according to : definition and examples)

C **Arrange the following elements in a descending order according to the metallic property ? Why ?** ($_{11}Na$ – $_{12}Mg$ – $_{19}K$)

D **Calculate the height of a mountain if the temperature at its foot is 30°C and at its top is (– 9°C).**

Question 4

A **What is meant by each of the following ... ?**

1. Global warming phenomenon.
2. Trace.
3. The degree of ozone above an area is 300 dobson.

B **Mention one example for :**

1. Element used in food preservation.
2. Mold.
3. Cast.

C **What happens in the following situations ... ?**

1. Putting a hot water container in the freezer and close the fridge.
2. Dipping of old insects in resinous matter and the matter solidifies.
3. Mixing of animal and human wastes with water.



17 El-Dakahlia Governorate — Educational Directorate

Answer the following questions :

Question  1

A Using the following diagram which represents a part of the periodic table, answer the following questions :

$_1H$																	$_2He$
3	X											5	6	Y	8	9	10
11	12														Z	17	G
19	M				N											35	$_{36}Kr$

1. Write the letter(s) of the element(s) which is/are :
   (1) among transition elements.
   (2) located in period (3) and group (6A).
   (3) among noble gases.
   (4) considered among s-block.
   (5) considered among p-block.

2. Choose :
   (1) The letter (Y) represents .... element.
   a. $_9F$ b. $_8O$ c. $_{12}Mg$ d. $_7N$
   (2) The letter (M) represents .... element.
   a. $_{12}Mg$ b. $_{16}S$ c. $_{20}Ca$ d. $_{18}Ar$
   (3) The letter (N) is located in .... block.
   a. s b. p c. d d. f

3. What is the atomic number of the elements (N) and (G) ?

B Problem :

If the temperature at sea level is 24.5°C, find the temperature at the top of troposphere layer if its thickness is 13 kilometre.

Question  2

A Choose the correct answer :

1. The properties of the element which has atomic number equals 17 are similar to the element which has atomic number equals ....
   a. 7 b. 9 c. 15 d. 20
2. .... is the lowest metallic element is group (1A).
   a. Na b. Cs c. K d. Li

3. The oxide which dissolves in water and produces an acid is ....
   a. MgO   b. FeO   c. CuO   d. CO_2
4. The gas which is evolved on reacting alkali metals with water is ....
   a. oxygen.   b. nitrogen.   c. hydrogen.   d. helium.
5. The volume of hydrogen gas evolving from water electrolysis is .... the volume of oxygen gas.
   a. equal to   b. twice   c. half   d. four times
6. One dobson unit is defined as ....
   a. 3 mm.   b. 0.1 mm.   c. 0.01 mm.   d. 2 mm.

B "Ozone layer is found in the stratosphere layer, it's important to protect the life of organisms"

1. What is the average thickness of ozone layer in atmosphere ?
2. What is the only element that forms ozone gas ?
3. Complete :
   a. Ozone layer protects the Earth from the harmful effects of .... radiation.
   b. The thickness of ozone layer at STP is ....
4. Put (✓) or (✗) :
   Ozone layer prevents penetration of all types of UV radiation. (   )

Question 3

A Give reason for each of the following :

1. Mammoth fossil is preserved as a complete body fossil.
2. Naming the bald eagle by this name.
3. Water molecule is from polar compounds.
4. The global warming phenomenon has negative effects on Earth.

B Arrange the following fossils starting with first appearance on the life stage with explanation :

(Cast fossil of fish – Mammoth fossil – Trilobite fossil – Archaeopteryx fossil)

Question 4

A Write the scientific term of each of the following :

1. The continuous decrease in the number of a certain species of living organisms, without compensation until they all die out.
2. A group of food chains connected with each other.
3. The environmental system that is not affected severely by the absence of one species of living organisms that live in it.

4. An aquatic plant used by pharaohs to manufacture writing papers.
5. Traces and remains of old living organisms that are preserved in the sedimentary rocks.
6. Safe places that are specified to protect the endangered species in their homeland.

B Calculate :

The percentage of erosion of ozone layer in a certain area, knowing that ozone degree at this area is 255 dobson.

18 Ismailia Governorate — Educational Directorate



Answer the following questions :

Question 1

A Choose the correct answer :

1. Elements of group (7A) are known as ....
   a. inert gases. b. alkali metals.
   c. halogens. d. alkaline Earth metals.
2. Meteors are burnt in .... layer.
   a. ionosphere b. stratosphere c. mesosphere d. thermosphere
3. Elements of the same period in the modern periodic table have the same ....
   a. number of energy levels. b. atomic number.
   c. number of electrons in the outermost energy level. d. valency.
4. .... protectorate is the first one established in Egypt.
   a. Ras Mohamed b. Wadi Hetan c. Saint Cathrine d. Petrified forest
5. Metal oxides are .... oxides.
   a. acidic b. basic c. both of them d. no correct answer
6. All of the following are greenhouse gases except ....
   a. CO_2 b. O_2 c. N_2O d. CH_4
7. Fossils are preserved in .... rocks.
   a. sedimentary b. igneous c. metamorphic d. no correct answer
8. There are .... bonds between water molecules.
   a. ionic b. covalent c. hydrogen d. metallic

B Give reasons for the following :

1. The lower part of stratosphere is suitable for flying aeroplanes.
2. Simple ecosystem is affected strongly by the absence of one of its species.
3. The atomic size increases by increasing the atomic number within the same group in the modern periodic table.
4. Stopping producing concorde aeroplanes.

C Mention one use for the following elements :

1. Radioactive cobalt 60. 2. Liquefied nitrogen.

Question 2

A **Correct the underlined words :**

1. The ozone layer is found in **thermosphere** layer.
2. Ferns fossils indicate that the environment where they lived was **a sea floor**.
3. $Mg + 2HCl \xrightarrow{dil.} \mathbf{Mg + Cl_2}$
4. **Aneroid** is an instrument used to determine the elevation of aeroplanes above sea level.
5. Ice crystals have **round** shape and large volume.
6. **Copper** reacts instantly with water and hydrogen gas evolves.
7. Elements of **p-block** are organized in two groups.

B **What happens when... ?**

1. Ascending up in troposphere (concerning : temperature and atmospheric pressure).
2. Existence of ozone in conditions of standard temperature and pressure (STP).

C **If the temperature at the base of a mountain = 30°C and its height = 2000 m, Find the temperature at its top.**

D **Mention three ways to protect living organisms from extinction.**

Question 3

A **Complete the following sentences :**

1. Most of weather phenomena happen in .... layer.
2. Transition elements start to appear from period number .... in the modern periodic table.
3. Archaeopteryx is the link between birds and ....
4. The ozone layer doesn't allow the penetration of all .... ultraviolet rays.
5. .... is an example of polar compounds.
6. Increasing of mercury concentration in drinking water causes ....
7. Fluorine and chlorine exist in .... state.
8. .... is from the negative effects of global warming phenomenon.

B **Locate the position of the following elements in the modern periodic table :**

1. $_{20}Ca$
2. $_{18}Ar$

C **Mention one example for each of the following :**

1. Fossils are found in El-Mokattam mountain.
2. One element from alkali metals.
3. An endangered bird.
4. A metalloid element.



Question 4

A Write the scientific term of each of the following :

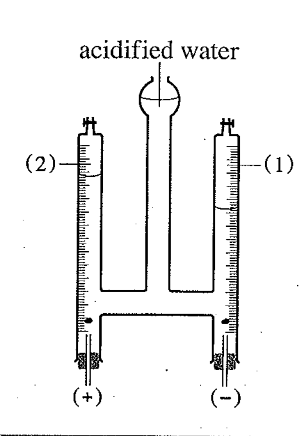
1. A charged layer reflects radio waves.
2. A kind of water pollution, which causes many diseases as typhoid.
3. The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.
4. Replacing part by part, the wood material of the trees by silica to form petrified fossils.
5. The continuous increase in the temperature of the Earth's near-surface air.
6. The region between stratosphere and mesosphere at which the temperature remains constant.
7. A famous extinct animal in ancient periods.

B Choose the odd word out :

1. $_{2}He$ / $_{10}Ne$ / $_{18}Ar$ / $_{11}Na$
2. Dodo bird / Quagga / Papyrus plant / Mammoth.
3. Cast / Fossil of a complete body / Fossil record / Petrified fossils.

C Examine the opposite figure, then answer :

1. What is the name of this device ?
2. Label the numbers (1) and (2) ?
3. Write down the balanced symbolic equation which represents the reaction.



19 Damietta Governorate — Damietta Educational Directorate

Answer the following questions :

Question 1

A Complete the following sentences :

1. The atomic size is measured by ...., but the atmospheric pressure is measured by ....
2. The ultraviolet radiation has a .... effect and the infrared radiation has a .... effect.
3. Eating fish which contains high concentration of lead causes .... , but drinking water which contains high concentration of mercury leads to ....
4. The highest temperature layer in the atmosphere is .... and the least temperature one is ....
5. Basic oxides are .... oxides and their solutions turn the litmus solution into ....





B Mention the importance of each of the following :

1. Ozone layer.
2. Hofmann's voltameter.
3. Cobalt 60

C Locate the position of the following elements in the modern periodic table : (With drawing)

1. $_{17}Cl$
2. $_{20}Ca$
3. $_{10}Ne$

Question 2

A Write the scientific term of the following :

1. The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.
2. The halogen which exists in a liquid state.
3. The death of all members of certain species of living organisms.
4. A type of ultraviolet radiations that penetrates the ozone layer by a percentage 100%
5. Safe places established to protect endangered species in their natural environment.
6. The weight of air column of an atmospheric height above a unit area.

B Mention one example for each of the following :

1. An endangered bird.
2. A complete body fossil.
3. A metalloid element.
4. An extinct bird.
5. A polar compound.

C Calculate the height of a mountain if the temperature at its foot is (30°C) and at its top is (– 6°C).

Question 3

A Choose the correct answer :

1. The degree ozone layer is measured by a unit called ....
   a. km. b. dobson. c. nanometre. d. mm^3.
2. Fossils are often found in .... rocks.
   a. metamorphic b. volcanic c. sedimentary d. igneous
3. The coldest atmospheric layer is ....
   a. troposphere. b. stratosphere. c. mesosphere. d. thermosphere.
4. The .... form positive ions during chemical reactions.
   a. noble gases b. nonmetals c. alkali metals d. halogens
5. .... react very instantly with water and hydrogen gas evolves.
   a. K and Na b. Cu and Ag c. Zn and Fe d. Ca and Mg

B Write the balanced chemical equations which express the following reactions :

1. Magnesium with dil. hydrochloric acid.
2. Sodium with water.
3. Bromine with potassium iodide.



C Mention the harms of :

1. Storing water in plastic bottles of mineral water.
2. Melting the polar ice.
3. Overuse of freon.

Question 4

A Give reasons for :

1. The lower part of stratosphere is suitable for flying aeroplanes.
2. Petrified woods are considered from fossils although they look like rocks.
3. Dissolving of sugar in water although it is among covalent compounds.
4. Occurrence of aurora phenomenon.

B What is meant by ... ?

1. Fossils.
2. Chemical activity series.
3. Greenhouse effect.

C Correct the underlined words :

1. Elements of d-block contain **lanthanides**.
2. **Quagga** is the most famous extinct animal in the old times.
3. Meteors burn in **thermosphere** layer.

20 Kafr El-Sheikh Governorate — Educational Directorate

Answer the following questions :

Question 1

A Choose the correct answer :

1. .... is a polar compound.
   a. Petrol b. Water c. Alcohol
2. The main energy levels discovered by Bohr in the atom are ....
   a. 7 b. 5 c. 3
3. The first layer in the atmospheric envelope above the sea level is ....
   a. mesosphere. b. stratosphere. c. troposphere.
4. Mammoth was preserved in ....
   a. resinous matter. b. snow. c. mud sediments.

B Write the scientific term of each of the following :

1. One of components of the atmosphere that its percentage increased in recent years causing the greenhouse phenomenon.

2. Safe places established to protect endangered species in the natural places.
3. A table in which the elements are arranged according to their atomic numbers and the way of filling the energy sublevels with electrons.

Question 2

A Give reason for each of the following :

1. Petrified woods are considered from fossils although they look like rocks.
2. The atomic size increases in the same group by increasing the atomic number.
3. Governments put laws for regulating the process of hunting of some living organisms.
4. Halogens don't exist individually in nature, but they exist in chemical compounds.

B Give a brief definition for each of the following :

1. Chemical activity series.
2. Exosphere.
3. Fossils.

Question 

A Mention the effects resulting from the following :

1. Putting in the freezer of the fridge a closed bottle completely filled with water.
2. Extinction of one species or more from a simple balanced ecosystem.
3. Sediments fill a snail shell cavities, then later it solidifies and the shell is removed.
4. On going above sea level.

B Put (✓) in front of the right statements and (✗) in front of the wrong statements :

1. Nonmetal oxides dissolve in water forming acidic solutions. ( )
2. Meteors burn in the mesosphere. ( )
3. Silicon slides are good conductors of electricity. ( )

Question 

A Illustrate with chemical equations only the reactions of the following :

1. The formation of ozone by the effect of ultraviolet radiation.
2. Forming a salt of an acid when dilute acid is added to a metal.
3. Decomposition of acidified water by electricity into two elements hydrogen and oxygen.

B Complete the following statements :

1. .... is the layer in the atmospheric envelope which contains most of the ozone which is located between 20 to .... km above sea level.
2. Alkali metals are good conductors of .... and ....

21 El-Behiera Governorate — Bani El-Delengate Official School

Answer the following questions :

Question 1

A Choose the correct answer :

1. Satellites orbit in .... layer.
   a. stratosphere b. exosphere c. mesosphere d. thermosphere
2. Ozone degree is measured by a unit called ....
   a. km. b. millibar. c. dobson. d. nanometre.
3. Which of the following fossils indicates that the environment, where they lived was a hot and rainy tropical environment ? ....
   a. Nummulites fossils. b. Ferns fossils.
   c. Coral fossils. d. Archaeopteryx fossils.
4. All of the following are ozone pollutants except ....
   a. methyl bromide gas. b. CO_2 c. halons. d. CFC_s

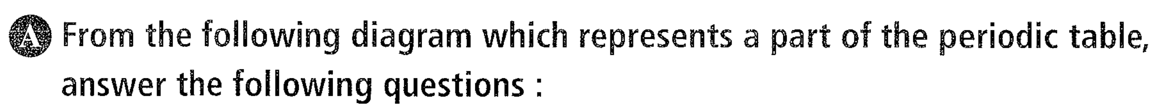
B Mention the harms of :

1. Drinking water contains high concentration of mercury.
2. Global warming phenomenon. (one harm)

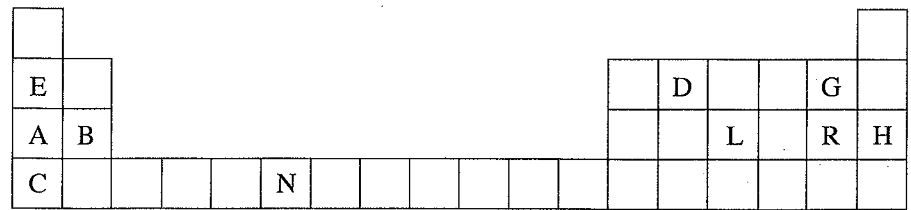
C Mention one use for each of the following :

1. Liquefied nitrogen. 2. Coral fossils. 3. Van-Allen belts.

Question 2



A From the following diagram which represents a part of the periodic table, answer the following questions :



[NB. The letters in the table don't represent the actual symbols of the elements]

1. Arrange the elements B, A, R, L descendingly according to the atomic size.
2. Complete the following :
   The shaded part represents .... elements.
3. Write the letter(s) of the element(s) which :
   (a) Belong(s) to d-block. (b) is/are from inert gases.
   (c) Belong(s) to alkali metals.





B **Write the scientific term of each of the following :**

1. It is a series in which metals are arranged in a descending order according to their chemical activity.
2. It is addition of any substance to the water which causes continuous gradual change in water properties affecting the health and the life of living creatures.
3. A type of ultraviolet radiations that is absorbed (95%) by the ozone layer.
4. It is the continuous decrease without compensation in the number of certain species of living organisms until all members of species die out.
5. It is the solidified resinous matter which was secreted by pine trees in old geologic ages.

C **Compare between each of the following :**

1. Sodium ($_{11}Na$) and calcium ($_{20}Ca$).
   (According to : the position in the modern periodic table and the reaction with water)
2. Remains and mold. (according to : definition and example).

Question 3

A **Complete the following sentences :**

1. The height of atmospheric envelope above sea level is ....km, while the normal atmospheric pressure equals .... millibar.
2. $CO_2 + H_2O \longrightarrow$ ....
3. $Br_2 + 2KI \longrightarrow$ .... + ...
4. Moseley arranged the elements ascendingly according to .... , while Mendeleev arranged the elements ascendingly according to ....
5. The crystal of ice has .... shape.

B **Choose the odd word out, and find the relation between the others :**

1. $_9F$ / $_6C$ / $_{35}Br$ / $_{17}Cl$
2. Dodo bird / Ibis bird / Bald eagle / Panda bear.

Question 4

A **Correct the underlined words in the following statements :**

1. **Ammonites** fossils are found in limestone rocks which form El-Mokattam mountain.
2. Infrared radiation has a **chemical** effect.
3. Hofmann's voltameter used in **thermal analysis** of acidified water.

B **Calculate the temperature at the top of a mountain, which its height is 4 km. If the temperature at the base of that mountain is 24°C.**

C **Give reasons for :**

1. Water has high boiling point.
2. Magnesium oxide is a basic oxide.
3. Ozone layer is formed in stratosphere.
4. Complicated ecosystem is not affected much by the absence of one of its species.



22 El-Fayoum Governorate — Educational Directorate

Answer the following questions :

Question 1

A Complete the following statements :

1. Mendeleev arranged the elements ascendingly according to .... , while Moseley arranged them ascendingly according to ....
2. The highest temperature layer in the atmosphere is .... and the least temperature one is ....
3. Dodo bird is .... bird, while bald eagle is .... bird.
4. The scientist .... discovered the main energy levels in the atom.
5. There are .... bonds between water molecules.

B What is meant by ... ?

1. Fossils.
2. Semi-metals.
3. Atmospheric pressure.

C Locate the position of the following elements in the modern periodic table :

1. $_{10}Ne$
2. $_{19}K$

Question 2

A Correct the underlined words in the following statements :

1. Transition elements start to appear in the **first** period.
2. Increasing O_2 concentration in the atmosphere produces the global warming phenomenon.
3. Meteors burn in **stratosphere**.
4. **Mammoth** is an example of microfossils.
5. Sodium oxide is from **acidic** oxides.
6. **Wadi El-Hetan** protectorate is the first established natural protectorate in Egypt.

B What is the importance of ... ?

1. Ozone layer.
2. Index fossils.
3. Cobalt 60

C Mention one difference between : Cast and mold.

Question 3

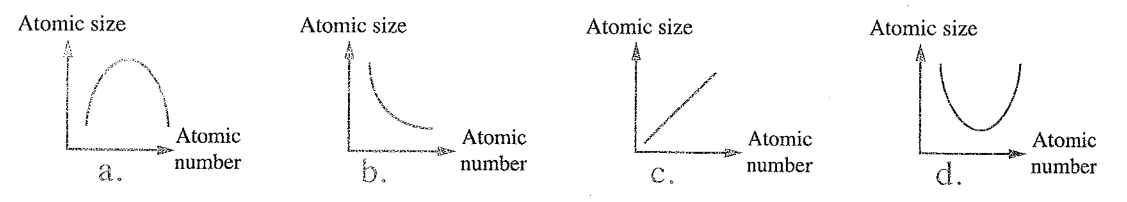
A Write the scientific term of each of the following statements :

1. The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.

2. A type of water pollution is originated from discharging of factories wastes and sewage in canals, rivers and seas.
3. The continuous decrease in numbers of species members without compensation until they all die out.
4. Metals are arranged descendingly according to their chemical activity.
5. A charged layer reflects radio waves.

B Choose the correct answer :

1. .... is located between stratosphere and mesosphere.
   a. Tropopause   b. Stratopause   c. Mesopause   d. Thermopause
2. Graph .... represents the graduation of the atomic size in the third period.



3. .... is one of the most important causes of extinction in the recent ages.
   a. Volcanic eruption   b. Falling of icebergs
   c. Falling of meteorites   d. Overhunting and environmental pollution
4. Fossils are often found in .... rocks.
   a. metamorphic   b. sedimentary   c. volcanic   d. igneous
5. All of the following are from the properties of water except ....
   a. it has a neutral effect on both of litmus papers.
   b. it is a polar compound.
   c. its volume increases by freezing.   d. it decomposes by heat into its elements.

C What are the results of ... ?

1. Sodium isn't kept under kerosene or paraffin.
2. Storing water in plastic bottles of mineral water.

Question 4

A Give reasons for :

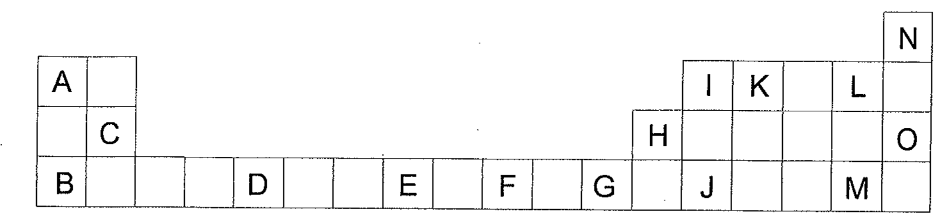
1. Van-Allen belts play an important role in atmosphere.
2. Although sugar is a covalent compound, it dissolves in water.
3. Petrified woods are considered from fossils although they look like rocks.

B Write the balanced chemical equations which express the following reactions :

1. The reaction between bromine and potassium iodide.
2. Magnesium with dil. hydrochloric acid.

C Calculate the height of a mountain if the temperature at its foot is 20°C and at its top is (– 6°C).

D Study the following figure which represents a section of the periodic table, then answer :



[NB. The letters in the table don't represent the actual symbols of the elements]

Write the symbol(s) which indicate(s) :

a. Halogens.
b. Inert gases.
c. The most active metal.
d. Transition elements.

23 El-Menia Governorate — St. Mark and El-Tawfik School

Answer the following questions :

Question 1

A Choose the correct answer :

1. The scientist .... had discovered the main energy levels.
   a. Moseley b. Bohr c. Hofmann d. Mendeleev
2. The atomic number of an element that exists in group (7A) and period (2) is ....
   a. 12 b. 7 c. 9 d. 17
3. Each period in the periodic table starts with a/an ....
   a. metal. b. metalloid. c. nonmetal. d. inert gas.
4. .... is considered from halogens.
   a. Sodium b. Chlorine c. Helium d. Calcium
5. Ozone layer is found in .... layer.
   a. troposphere b. stratosphere c. mesosphere d. thermosphere

B Write the balanced chemical equations that illustrate the following reactions :

1. Reaction of sodium with water.
2. Reaction of magnesium with dilute hydrochloric acid.
3. Reaction of carbon dioxide gas with water.
4. Reaction of chlorine gas with potassium bromide solution.





Question 2

A Write the scientific term of each of the following :

1. The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.
2. The apparatus which is used in water electrolysis.
3. The weight of air column of an atmospheric height on a unit area.
4. A unit used for measuring ozone degree.
5. The death of all members of species of living organisms.

B Problem : Calculate the height of a mountain if the temperature at its base is (30°C) and at its top is (– 9°C).

Question 3

A Complete the following statements :

1. The modern periodic table consists of .... horizontal periods and .... vertical groups.
2. By increasing the atomic number in groups, the atomic size .... due to the increase in the number of ....
3. .... and .... are examples of polar compounds.
4. The valency of alkali metal elements is ....
5. Mixing animal and human wastes with water causes .... water pollution, while dumping atomic wastes in oceans causes .... water pollution.
6. The highest temperature layer in the atmosphere is .... and the lowest temperature layer in the atmosphere is ....
7. .... and .... are endangered species.

B What's the importance of ... ?

1. Van-Allen belts.
2. Ozone layer.
3. Cobalt 60

C Give reasons for the following :

1. The lower part of stratosphere is suitable for flying aeroplanes.
2. Liquefied nitrogen is used in preservation of the eye cornea.

Question 4

A Choose from column (B) what suits it in column (A) :

(A) Harms	(B) Pollutant
1. Death of brain cells.	a. lead.
2. Liver cancer.	b. sodium.
3. Blindness.	c. mercury.
	d. arsenic.

B What's meant by each of the following ... ?

1. Fossils.
2. Metalloids.
3. Aurora phenomenon.

C What will happen in each of the following cases ... ?

1. Storing water in plastic bottles of mineral water.
2. The overuse of freon.

24 Sohag Governorate — Educational Directorate

Answer the following questions :

Question 1

A Complete the following statements :

1. The modern periodic table consists of .... periods and the period number represents the number of ....
2. Pure water boils at .... and freezes at ....
3. Most weather phenomena occur in .... layer, while satellites swim through the ....
4. From the reasons of recent extinction are .... and ....

B Mention one difference between :

1. Acidic oxide and basic oxide (dissolving in water).
2. Simple ecosystem and complicated ecosystem (example only).

C If the temperature at the sea level is 20.6°C. Find the temperature at the top of a mountain of height 2 km above Earth's surface.

Question 2

A Give reasons for :

1. Cobalt 60 is used in food preservation.
2. Petrified woods are considered as fossils although they look like rocks.
3. Elements of the same group have similar properties.

B What happens when ... ?

1. The overuse of freon.
2. Adding dil. HCl to a piece of carbon.
3. Decrease of water temperature less than 4°C.

C Mention the importance of :

1. Van-Allen belts.
2. Altimeter.

Question 3

A Choose the correct answer :

1. The scientist who discovered the main energy levels is ....
   a. Mendeleev. b. Bohr. c. Rutherford.
2. Complete body fossils of insects are found preserved in ....
   a. amber. b. snow. c. ocean.
3. All of the following gases are greenhouse gases except ....
   a. CO_2 b. O_2 c. CH_4
4. The density of ice is .... the density of water.
   a. less than b. more than c. equal to
5. .... is considered from halogens.
   a. Sodium b. Chlorine c. Helium
6. The normal atmospheric pressure at the sea level equals .... millibar.
   a. 1013.25 b. 76 c. 1.013

B Write the chemical equations which represent the following reactions :

1. Reaction of sodium with water.
2. Reaction between chlorine gas and potassium bromide.
3. Carbon dioxide with water.

C Calculate the atomic number of :

1. Element (X) is located in the 3^{rd} period and group (2A).
2. Element (Y) is located in the 1^{st} period and group (1A).

Question 4

A Write the scientific term :

1. Elements have the properties of metals and nonmetals.
2. A charged layer reflects radio waves.
3. A bond that exists between water molecules.
4. A unit used for measuring ozone degree.
5. An apparatus used in electrolysis of water.
6. Safe areas established to protect endangered species.

B Correct the underlined words :

1. **Fluorine** is the only liquid halogen.
2. **Chemical** pollution of water causes many diseases as typhoid and hepatitis.
3. Meteors burn in **stratosphere**.
4. Archaeopteryx links between reptiles and **mammals**.
5. **Sodium chloride** is from polar compounds.

C Locate the position of the following elements in the modern periodic table :

1. $_{10}Ne$ 2. $_{19}K$ 3. $_{16}S$

25 Qena Governorate — Educational Zone

Answer the following questions :

Question 1

A Complete the following statements :

1. In the modern periodic table, the elements are arranged according to .... and ....
2. The strongest metallic element is found in group ....
3. The thickness of mesosphere layer is about .... km.
4. .... and .... are considered from ozone layer pollutants.
5. The normal atmospheric pressure at the sea level equals .... mb.
6. Fossils always exist in the .... rocks.

B Write a definition for the following :

1. Extinction. 2. Electronegativity. 3. Atmospheric pressure.

Question 2

A Choose the correct answer :

1. Which of the following fossils play an important role in petroleum exploration ? ....
   a. Foraminifera and radiolaria. b. Nummulites and ammonites.
   c. Foraminifera and trilobite.
2. The .... is/are used in preservation of agricultural crops.
   a. methyl bromide gas b. halons c. nitrogen oxide
3. The coldest atmospheric layer is ....
   a. troposphere. b. thermosphere. c. mesosphere.
4. The elements of group (7A) are known as ....
   a. alkali metals. b. halogens. c. alkaline earth metals.
5. There is .... bonds between water molecules.
   a. ionic b. hydrogen c. covalent
6. Metal oxides are .... oxides.
   a. acidic b. basic c. amphoteric
7. Which of the following fossils indicates that the environment, where they lived was clear warm and shallow seas ? ....
   a. Nummulites fossils. b. Ferns fossils. c. Coral fossils.

B Give a reason for :

1. Occurrence of extinction in the recent ages.
2. Sodium is kept under the surface of kerosene.

Question 3

A Write the scientific term :

1. The horizontal rows in the modern periodic table.
2. The radioactive element which is used in food preservation.
3. The decrease in the thickness of ozone layer.
4. The separating region between troposphere and stratosphere.
5. The gas which is collected at the cathode in water electrolysis.
6. The semi-conductor element which is used in electronics industry.

B Locate the position of the following elements in the modern periodic table :

1. $_{20}Ca$ 2. $_{17}Cl$ 3. $_{5}B$ 4. $_{18}Ar$

Question 4

A Put (✓) or (✗) in front of the following :

1. The air moves vertically in the bottom part of the stratosphere. ( )
2. Alkali metals locate in group (2A). ( )
3. Ice crystals have pentagonal shapes. ( )
4. In the period as the atomic number increases, the atomic size increases. ( )
5. The index fossil indicates the age of the sedimentary rocks. ( )
6. The simple ecosystem affected strongly by the absence of one species from its members . ( )

B Compare between :

The stratosphere layer and the mesosphere layer (in view of pressure and temperature).